

CLAIMS:

1. A method comprising:
monitoring a plurality of signals, each of the signals generated by a respective one of a plurality of sensors as a function of posture of a patient;
identifying a plurality of posture events based on the signals;
associating each of the posture events with a therapy parameter set currently used by a medical device to deliver a therapy to the patient when the posture event is identified; and
determining a value of a posture metric for each of a plurality of therapy parameter sets based posture events associated with the therapy parameter sets.
2. The method of claim 1, wherein the plurality of sensors comprises a plurality of orthogonally aligned accelerometers, and identifying a plurality of posture events comprises identifying a plurality of posture events based on a DC component of each of the signals generated by the plurality of accelerometers.
3. The method of claim 1, wherein the plurality of sensors are positioned at a plurality of locations, each of locations one of on and within a body of the patient.
4. The method of claim 1, wherein identifying a plurality of posture events comprises periodically identifying a posture of the patient.
5. The method of claim 4, wherein periodically identifying a posture comprises periodically identifying whether the patient is upright or recumbent.
6. The method of claim 4, wherein periodically identifying a posture comprises periodically identifying whether the patient is standing, sitting, or recumbent.
7. The method of claim 4, wherein periodically identifying a posture comprises comparing at least one of the signals to at least one threshold value.

8. The method of claim 4, wherein determining a value of a posture metric for a therapy parameter set comprises determining at least one of an amount and a percentage of time spent in a posture based on the determined postures associated with the therapy parameter set.
9. The method of claim 1, wherein identifying a plurality of posture events comprises identifying posture transitions.
10. The method of claim 9, wherein determining a value of a posture metric for a therapy parameter set comprises determining an average number of posture transitions over a period of time based on the identified posture transitions associated with the parameter set.
11. The method of claim 1, wherein identifying a plurality of posture events comprises:
determining when the patient is awake; and
identifying posture events while the patient is awake.
12. The method of claim 1, further comprising presenting a list of the plurality of therapy parameter sets and posture metric values associated with the therapy parameter sets.
13. The method of claim 12, further comprising ordering the list of therapy parameter sets according to the associated posture metric values.
14. The method of claim 13, wherein determining a value of a posture metric comprises determining a value of each of a plurality of posture metrics for each of a plurality of therapy parameter sets based on posture events associated with the therapy parameter sets, and ordering the list comprises ordering the list according to a user selected one of the posture metrics.
15. The method of claim 1, wherein determining a value of a posture metric comprises:
determining a value of each of a plurality of posture metrics; and
determining a value of an overall posture metric based on the plurality of posture metric values.

16. The method of claim 1, further comprising presenting a graphical representation of the identified posture events.
17. The method of claim 16, wherein presenting a graphical representation comprises presenting at least one of a trend diagram, a histogram and a pie chart based on the identified posture events.
18. The method of claim 1, wherein the medical device comprises an implantable medical device.
19. The method of claim 18, wherein the implantable medical device comprises at least one of an implantable neurostimulator and an implantable drug pump.
20. The method of claim 1, wherein the medical device comprises at least one of a trial neurostimulator and a trial pump.
21. A medical system comprising:
 - a medical device that delivers a therapy to a patient;
 - a plurality of sensors, each of the sensors generating a signal as a function of posture of the patient; and
 - a processor that monitors the plurality of signals generated by the sensors, identifies a plurality of posture events based on the signals, associates each of the posture events with a therapy parameter set currently used by the medical device to deliver a therapy to the patient when the posture event is identified, and determines a value of a posture metric for each of a plurality of therapy parameter sets based posture events associated with the therapy parameter sets.
22. The medical system of claim 21, wherein the plurality of sensors comprises a plurality of orthogonally aligned accelerometers, and the processor identifies the plurality of

posture events based on a DC component of each of the signals generated by the plurality of accelerometers.

23. The medical system of claim 21, wherein the plurality of sensors are positioned at a plurality of locations, each of locations one of on and within a body of the patient.

24. The medical system of claim 21, wherein medical device includes at least some of the sensors.

25. The medical system of claim 21, wherein the processor periodically identifies a posture of the patient based on the signals.

26. The medical system of claim 25, wherein the processor periodically identifies whether the patient is upright or recumbent based on the signals.

27. The medical system of claim 25, wherein the processor periodically identifies whether the patient is standing, sitting, or recumbent based on the signals.

28. The medical system of claim 25, wherein processor compares at least one of the signals to at least one threshold value, and periodically identifies a posture based on the comparison.

29. The medical system of claim 25, wherein the processor determines at least one of an amount and a percentage of time spent in a posture based on the determined postures associated with a therapy parameter set as a value of a posture metric for the therapy parameter set.

30. The medical system of claim 21, wherein the processor identifies posture transitions as posture events.

31. The medical system of claim 30, wherein the processor determines an average number of posture transitions over a period of time as a value of a posture metric for a therapy parameter set based on the identified posture transitions associated with the parameter set.
32. The medical system of claim 21, wherein the processor determines when the patient is awake, and identifies posture events while the patient is awake.
33. The medical system of claim 21, further comprising a display that presents a list of the plurality of therapy parameter sets and posture metric values associated with the therapy parameter sets.
34. The medical system of claim 33, further comprising a programming device that includes the display, wherein the programming device orders the list of therapy parameter sets according to the associated posture metric values.
35. The medical system of claim 34, wherein the processor determines a value of each of a plurality of posture metrics for each of a plurality of therapy parameter sets based on posture events associated with the therapy parameter sets, and the programming device orders the list according to a user selected one of the posture metrics.
36. The medical system of claim 21, wherein the processor determines a value of each of a plurality of posture metrics, and determines a value of an overall posture metric based on the plurality of posture metric values.
37. The medical system of claim 21, further comprising a programming device that includes the display, wherein the programming device presents a graphical representation of the identified posture events via the display.
38. The medical system of claim 37, wherein the programming device presents at least one of a trend diagram, a histogram and a pie chart based on the identified posture events.

39. The medical system of claim 21, wherein the medical device comprises an implantable medical device.
40. The medical system of claim 39, wherein the implantable medical device comprises at least one of an implantable neurostimulator and an implantable drug pump.
41. The medical system of claim 21, wherein the medical device comprises at least one of a trial neurostimulator and a trial pump.
42. The medical system of claim 21, wherein the processor comprises a processor of the medical device.
43. The medical system of claim 21, further comprising a programming device, wherein the processor comprises a processor of the programming device.
44. A medical system comprising:
 means for monitoring a plurality of signals, each of the signals generated by a respective one of a plurality of sensors as a function of posture of a patient;
 means for identifying a plurality of posture events based on the signals;
 means for associating each of the posture events with a therapy parameter set currently used by a medical device to deliver a therapy to the patient when the posture event is identified; and
 means for determining a value of a posture metric for each of a plurality of therapy parameter sets based posture events associated with the therapy parameter sets.
45. The medical system of claim 44, further comprising means for presenting a list of the plurality of therapy parameter sets and posture metric values associated with the therapy parameter sets.

46. The medical system of claim 45, further comprising means for ordering the list according to the posture metric values.

47. The medical system of claim 46, further comprising means for determining a value of each of a plurality of posture metrics for each of a plurality of therapy parameter sets based on posture events associated with the therapy parameter sets, wherein the means for ordering the list comprises means for ordering the list according to a user selected one of the posture metrics.

48. A medical system comprising:

an implantable medical device that delivers a therapy to a patient, monitors a plurality of signals, each of the signals generated by a respective one of a plurality of sensors as a function of posture of a patient, identifies a plurality of posture events based on the signals, and associates each of the posture events with a current therapy parameter set; and

an external programming device including a display that receives information identifying a plurality of therapy parameter sets and associated posture events from the implantable medical device via telemetry, determines a value of a posture metric for each of a plurality of therapy parameter sets based on posture events associated with the therapy parameter sets, and presents a list of the plurality of therapy parameter sets and posture metric values associated with the therapy parameter sets via the display.

49. The medical system of claim 48, wherein the implantable medical device determines when the patient is awake, and identifies posture events while the patient is awake.

50. The medical system of claim 49,

wherein the implantable medical device periodically identifies postures as posture events, and

wherein, for each of the therapy parameter sets, the external programming device determines at least one of an amount and a percentage of time spent in a posture based on the determined postures associated with a therapy parameter set as a value of a posture metric for the therapy parameter set.

51. The medical system of claim 48,
wherein the implantable medical device identifies posture transitions as posture events, and
wherein, for each of the therapy parameter sets, the external programming device determines an average number of posture transitions over a period of time as a value of a posture metric for a therapy parameter set based on the identified posture transitions associated with the parameter set.
52. The medical system of claim 48, wherein the programming device orders the list of therapy parameter sets according to the associated posture metric values.
53. The medical system of claim 52, wherein the programming device determines a value of each of a plurality of posture metrics for each of the plurality of therapy parameter sets based on posture events associated with the therapy parameter sets, receives a selection of one of the posture metrics from a user, and orders the list according to the user selected one of the posture metrics.
54. The medical system of claim 48, wherein the implantable medical device comprises at least one of an implantable neurostimulator and an implantable drug pump.
55. The medical system of claim 48,
further comprising the plurality sensors,
wherein sensors comprise a plurality of accelerometers, and the implantable medical device identifies a plurality of posture events based on a DC component of each of the signals generated by the plurality of accelerometers.
56. The medical system of claim 55, wherein at least some of the sensor are included within the implantable medical device.

57. The medical system of claim 56, wherein the sensors are located a plurality of locations, each of the locations one of on and within a body of the patient.
58. A programming device comprising:
a telemetry circuit;
a user interface including a display; and
a processor that receives information identifying a plurality of therapy parameter sets and associated posture events from an implantable medical device via the telemetry circuit, determines a value of a posture metric for each of a plurality of therapy parameter sets based on posture events associated with the therapy parameter sets, and presents a list of the plurality of therapy parameter sets and posture metric values associated with the therapy parameter sets via the display.
59. The programming device of claim 58, wherein the processor orders the list of therapy parameter sets according to the associated posture metric values.
60. The programming device of claim 59, wherein the processor determines a value of each of a plurality of posture metrics for each of the plurality of therapy parameter sets based on posture events associated with the therapy parameter sets, receives a selection of one of the posture metrics from a user via the user interface, and orders the list according to the user selected one of the posture metrics.
61. A computer-readable medium comprising instructions that cause a programmable processor to:
receive information identifying a plurality of therapy parameter sets and associated posture events from an implantable medical device;
determine a value of posture metric for each of a plurality of therapy parameter sets based on activity levels associated with the therapy parameter sets; and
present a list of the plurality of therapy parameter sets and posture metric values associated with the therapy parameter sets.